

B¹ which is lower than that of steel, and wherein the structural element which is moveable linearly back and forth is a structural element from the group comprising a connecting rod, a piston pin, a guide piston, and a piston guide.

B² 4. (Twice Amended) The tamping machine as claimed in claim 1, wherein the piston guide is produced from plastic in one piece together with at least one damping bush.

Please add the following new claims.

B³ 5. A tamping machine for soil compaction, comprising:
a working mass which is linearly reciprocable in a tamping direction to tamp soil;
a crank mechanism and a spring assembly which drive said working mass to linearly reciprocate in the tamping direction; and
an upper mass including a motor operatively coupled to the crank mechanism;
wherein

the crank mechanism has at least one structural element which is linearly reciprocable and which is produced from a material having a density lower than that of steel, and wherein the structural element comprises at least one of a connecting rod, a piston pin, a guide piston, and a piston guide.

6. The tamping machine as claimed in claim 5, wherein the material is an aluminum alloy.

7. The tamping machine as claimed in claim 5, wherein the material is a plastic.